

## **New Nuclear Plant Deployment Current State of the Industry**

### **Early Site Permits (ESP)**

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**Summary:** Three ESPs issued, one utility ESP application is currently under NRC review:

- Exelon – Clinton site, IL – issued on March 15, 2007.
- Entergy – Grand Gulf site, MS – issued on April 5, 2007.
- Dominion Energy – North Anna site, VA – issued on November 27, 2007.
- Southern – Vogtle site, GA – Under NRC review; final EIS decision expected July 2008; Commission decision expected 2009.
- Duke notified NRC of future planned ESP applications (as many as 2) – Possibly Oconee County, SC, and Davie County, NC, no dates identified.
- Unspecified power company announced plans to submit an ESP application in fiscal year 2010.

### **Combined Construction and Operating License (COL)**

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**Summary:** Of four COL applications submitted, one has been docketed for NRC review. 18 power companies intend to submit 21 license applications to the NRC for 32 units.

#### **Combined Construction and Operating License Applications (COLA) Submitted:**

- STP Nuclear Operating Co. – South Texas Project (STP), TX (2 units, ABWR) – Submitted September 2007 and docketed for NRC review November 29, 2007.
- TVA (NuStart) – Bellefonte site, AL (2 units, AP1000) – Submitted October 2007
- Dominion Energy – North Anna site, VA (1 unit, ESBWR) – Submitted November 28, 2007
- Duke Energy – William Lee site, SC (2 units, AP1000) – Submitted December 13, 2007

#### **Combined Construction and Operating License Applications (COLA) Planned:**

- Alternate Energy Holding – Bruneau region, ID (1 unit EPR) – submit COLA 4<sup>th</sup> Qtr. 2008
- Amarillo Power – Amarillo vicinity (undeclared), TX (2 units, EPR) - submit COLA 4<sup>th</sup> Qtr. 2008
- AmerenUE – Callaway site, MO (1 unit EPR) – submit COLA in 3<sup>rd</sup> Qtr. 2008
- DTE Energy – Fermi site, MI (1 unit, technology decision 12/07) – submit COLA in October 2008
- Entergy – River Bend site, LA (1 unit, ESBWR) - submit COLA in May 2008
- Exelon Generation – Matagorda or Victoria County, TX (2 unit, ESBWR) – submit COLA in November 2008
- Florida Power and Light – Turkey Point site, FL (2 units, AP1000) - COLA in 2009
- Entergy (NuStart) – Grand Gulf site, MS (1 unit, ESBWR) – submit COLA in February 2008
- Mid American – Boise ID, (undeclared, possibly US-APWR) submit COLA in December, 2008
- PPL – Susquehanna site, PA, (1 unit, EPR) submit COLA in late 2008
- Progress Energy – Harris site, NC (2 units, AP1000) - submit COLA in January 2008
- Progress Energy – Levy County, FL (2 units, AP1000) - submit COLA July 2008
- SCE&G – Summer site, SC (2 units, AP1000) - submit COLA in February 2008
- Southern Nuclear – Vogtle site, GA (2 units, AP1000) - submit COLA in March 2008
- Texas Utilities (TXU) – Comanche Peak site, TX (2 units, US APWR) - COLA in December 2008
- UniStar – Calvert Cliffs site, MD (1 unit, EPR) – partial COLA submitted July 2007, remainder expected in March 2008.
- UniStar – Nine Mile Point site, NY (1 unit, EPR) - submit COLA in 4<sup>th</sup> Qtr. 2008

**Licenses to Build Issued By NRC** – No license applications have been issued by NRC.

### **Reactor Design Certification (DC)**

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**Summary:** Two designs certified; two designs are under NRC review and one DC application expected to be submitted to NRC in December 2007.

- GE ABWR - Certified in 1997.
- Westinghouse AP1000 - Certified 2005. A modification to the certified design is currently under NRC review.
- GE ESBWR - Under NRC certification review, application docketed December 2005.
- AREVA US EPR– Application submitted December 12, 2007, not yet docketed.
- Mitsubishi Heavy Industries US APWR – Plans to submit certification application December 2007.

### **New Nuclear Plant Orders**

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**Summary:** No plant construction contracts initiated; six power companies have ordered large component forgings with three reactor vendors for potential nuclear plants.

**Long-Lead Equipment Orders:** Large forging orders initiated by AREVA, GE-Hitachi, & Toshiba.

- Dominion, Entergy, and Exelon have contracted with GE-Hitachi for long-lead component forgings.
- AmerenUE and UniStar have contracted with AREVA for long-lead component forgings.
- NRG Energy signed an agreement with Toshiba for long-lead component forgings.
- Only one large forging vender worldwide – Japan Steel Works – capacity limited.

**Plant Construction Contracts:** No plant contracts have been executed with reactor vendors.

### **New Nuclear Plant Construction, Operation & Deferral**

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**Summary:** TVA board voted to proceed with the completion of Watts Bar unit 2 in Tennessee at a total cost of \$2.5 billion with an estimated completion date in 2013.

**New Nuclear Plants under Construction:** Watts Bar unit 2 near Spring City, Tennessee.

**New Nuclear Plant Begin Operation:** None.

**Deferred:** None.

### **Federal Financial Incentives**

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**Summary:** EAct 2005 incentives are at various stages of development: two rules issued and one notice published.

**Standby Support:** Rule issued, no industry requests to date, no contracts issued.

- Final Rulemaking Issued - August 2006.
- Published Standard Conditional Agreement – September 2007.
- Expect first request from industry for Conditional Agreements – FY 2008.
- Expect first approval by DOE for standby support contracts - Late 2010.

**Production Tax Credits:** Notice issued.

- Published Internal Revenue Bulletin 2006-18 on May 2006.
- Final Rule on Tax Credit and Guidelines on “Certification Process” – FY 2008.

**Energy Facility Loan Guarantee:** Final Rulemaking issued. Congress provided DOE with authority to issue guarantees for up to \$4 billion in loans (FY07); and DOE has requested \$9 billion in loan guarantee authority for FY08:

- Guidelines issued August 2006 and DOE’s small scale loan guarantee solicitation with \$2 billion ceiling (excludes nuclear power participation) closed – December 2006.
- Final Rulemaking Issued – October 2007.
- No solicitation issued for nuclear power loan guarantee at this time; however, the Department is planning for an early to mid-2008 solicitation targeting nuclear power projects.
- First nuclear plant loan guarantee to be issued expected – January 2009.